

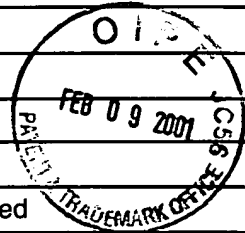
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




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			Application Number	09/685,977	
			Filing Date	10/10/2000	
			First Named Inventor	Hui Liu	
			Group Art Unit	2681	
			Examiner Name	Not yet assigned	
Sheet	1	of	3	Attorney Docket Number	005158.P001



U.S. PATENT DOCUMENTS					
Examiner Initials *	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Filing Date if Appropriate
		Number			
		6,067,290	Paulraj et al.	5/23/2000	
		6,064,694	Clark et al.	5/16/2000	
		6,052,594	Chuang et al.	4/18/2000	
		6,005,876	Cimini, Jr. et al.	12/21/1999	
		5,973,642	Li et al.	10/26/1999	
		5,956,642	Larsson et al.	9/21/1999	
		6,041,237	Farsakh	3/21/2000	
		6,064,692	Chow	5/16/2000	

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OTHER DOCUMENTS		
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<i>[Signature]</i>	BENDER et al., CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for	
<i>[Signature]</i>	Nomadic Users, IEEE Communications Magazine, July 2000, pp. 70-87.	
<i>[Signature]</i>	FRULLONE et al., PRMA Performance in Cellular Environments with Self-Adaptive Channel	
<i>[Signature]</i>	Allocation Strategies, IEEE Transactions on Vehicular Technology, November 1996, pp.657-665	
<i>[Signature]</i>	Vol. 45, No. 4.	

Examiner Signature	<i>[Signature]</i>	Date Considered	8/10/01
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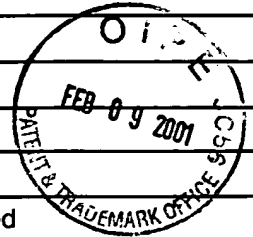
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				Filing Date	10/10/2000
				First Named Inventor	Hui Liu
				Group Art Unit	2681
				Examiner Name	Not yet assigned
Sheet	2	of	3	Attorney Docket Number	005158.P001



U.S. PATENT DOCUMENTS					
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	XU, GUANGHAN and LI, SAN-QI, Throughput Multiplication of Wireless Lans for Multimedia	
	Services: SDMA Protocol Design, 1994 IEEE, pp. 1326-1332.	
	WARD, JAMES and COMPTON, R. TED, JR., High Throughput Slotted ALOHA Packet Radio	
	Networks with Adaptive Arrays, IEEE Transactions on Communications, March 1993, pp. 460-470,	
	Vol. 41, No. 3.	

Examiner Signature		Date Considered	7/10/03
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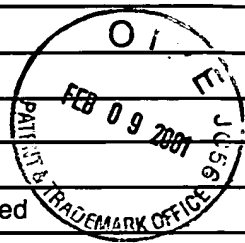
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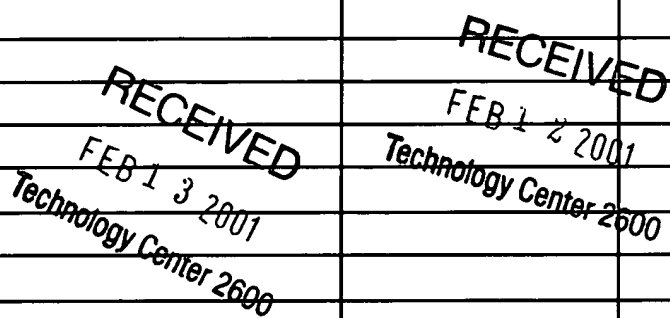
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Sheet	3	of	3	Attorney Docket Number	005158.P001



U.S. PATENT DOCUMENTS					
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	TSOULOS, G.V., Smart antennas for mobile communication systems: benefits and challenges,	
	Electronics & Communication Engineering Journal, April 1999, pp. 84-94.	
	SHAD et al., Indoor SDMA Capacity Using a Smart Antenna Basestation, 1997 IEEE, pp. 868-872.	
	FARSAKH, CHRISTOF and NOSSEK, JOSEF A., On the Mobile Radio Capacity Increase	
	Through SDMA, no date (after 1997).	

Examiner Signature		Date Considered	7/10/07
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**JUL 1 5 2002**

Application Number	09/685,977
Filing Date	October 10, 2000
First Named Inventor:	Hui Liu
Group Art Unit	2681
Examiner Name	Unassigned
Attorney Docket Number	005158.P001

Sheet	1	of	2
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Exam. Initial*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>e</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (If known)				
B	GB	2 209 858	A	Motorola Limited	08-06-1997			
C	WO	98/30047	A1	Array-Comm, Inc.	07-09-1998			
D	WO	98/16077	A2	Teratech Corporation	04-16-1998			
E	EP	0 926 912	A2	CSELT Centro Studi e Lab.	06-30-1999			
F	DE	198 00 953	C1	Siemens AG	07-29-1999			

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Substitute for Form 1449A/PTO (Modified)		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	09/685,977
		Filing Date	October 10, 2000
		First Named Inventor:	Hui Liu
		Group Art Unit	2681
		Examiner Name	Unassigned
		Attorney Docket Number	005158.P001
Sheet	2	of	
<b>OTHER ART – NO PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	R	WONG, C.Y., et al., <i>Multiuser OFDM With Adaptive Subcarrier, Bit, and Power Allocation</i> , IEEE Journal on Selected Areas in Communications, October 1999, IEEE Inc., New York, USA, Vol. 17, Nr. 10, pages 1747-1758, XP000854075, ISSN: 0733-8716 Sections I and II abstract.	

Examiner Signature		Date Considered	7/10/07
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Substitute for Form 1449A/PTO (Modified)  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		Application Number	09/685,977
		Filing Date	October 10, 2000
		First Named Inventor:	Hui Liu
		Group Art Unit	2681
		Examiner Name	Unassigned
		Attorney Docket Number	005158.P001

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Application Number	09/685,977
Filing Date	October 10, 2000
First Named Inventor:	Hui Liu
Group Art Unit	2681
Examiner Name	Unassigned
Attorney Docket Number	005158.P001

Sheet 1 OCT 31 2002 3 of 3


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Substitute for Form 1449A/PTO (Modified)  <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center; font-size: small;">(Use as many sheets as necessary)</p>		<b>Complete if Known</b>	
		Application Number	09/685,977
		Filing Date	October 10, 2000
		First Named Inventor:	Hui Liu
		Group Art Unit	2681
		Examiner Name	Unassigned
		Attorney Docket Number	005158.P001

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Sheet	2	of	2	<b>OTHER ART – NO PATENT LITERATURE DOCUMENTS</b>	
Examiner Initials*	Citation No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			T <sup>2</sup>
Y		GRUENHEID, R. et al.: "Adaptive Modulation and Multiple Access for the OFDM Transmission Technique", Wireless Personal Communications, Kluwer Academic Publishers, NL, Vol. 13, NR. 1/2, Year 2000, pages 5-13 XP000894156, ISSN: 0929-6212.			
Z		MOTEGI, M. et al.: "Optimum Band Allocation According to Subband Condition for BST-OFDM" 11 <sup>th</sup> IEEE International Symposium on Personal Indoor and Mobile Radio Communications, vol. 2, 18-21 September 2000, pages 1236-1240, XP002213669, Piscataway, NJ, USA, ISBN: 0-7803-6463-5.			
AA		KAPOOR, S. et al.: "Adaptive Interference Suppression in Multiuser Wireless OFDM Systems Using Antenna Arrays" IEEE Transactions on Signal Processing, vol. 47, no. 12, December 1999, pages 3381-3391, XP000935422, IEEE, New York, USA, ISSN: 1053-587X.			
BB		YE LI, et al.: "Clustered OFDM with channel estimation for high rate wireless data", Mobile Multimedia Communications, 1999. (MOMUC '99). 1999 IEEE International Workshop on San Diego, CA, USA, IEEE, US, 15 November 1999, pages 43-50, XP010370695, ISBN: 0-7803-5904-6.			
CC		NOGUEROLES, R. et al.: "Improved Performance of a Random OFDMA Mobile Communication System" Vehicular Technology Conference, 1998. VTC 98. 48 <sup>th</sup> IEEE Ottawa, Ontario, Canada, 18-21 May 1998, (1998-05-18), pages 2502-2506, XP010288120, ISBN: 0-7803-4320-4.			
DD		KINUGAWA, Y. et al.: "Frequency and Time Division Multiple Access with Demand-Assignment Using Multicarrier Modulation for Indoor Wireless Communications Systems", IEICE Transactions on Communications, Institute of Electronics Information and Comm. Eng. Tokyo, Japan, vol. E77-B, NR. 3, March 1994, pages 396-402, XP000451014, ISSN: 0916-8516.			

Examiner Signature		Date Considered	7/10/03
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Substitute for form 1449A/P 18

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	2	of	2
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**Complete if Known**

Application Number	09/685,977
Filing Date	October 10, 2000
First Named Inventor	Hui Liu
Art Unit	2681
Examiner Name	To be assigned
Attorney Docket Number	5158P001

## NON PATENT LITERATURE DOCUMENTS

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Application Number	09/685,997
Filing Date	October 10, 2000
First Named Inventor:	Hui Liu
Art Unit	2681
Examiner Name	Not Yet Assigned
Attorney Docket Number	005158.P001

Sheet 1 of 1

## U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)				
[Signature]		us-	5,734,967	3/31/1998	Kotzin et al.	
		us-	5,887,245	3/23/1999	Lindroth et al.	
		us-	6,061,568	5/9/2000	Dent	
		us-	6,108,374	8/22/2000	Balachandran et al.	
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		us-	6,366,195 B1	4/2/2002	Harel et al.	
		us-	6,477,158 B2	11/5/2002	Take	
		us-	2003/0067890 A1	4/10/2003	Goel et al.	
		us-	2003/0169824 A1	9/11/2003	Chayat	
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		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
[Signature]		JP	06029922		2/4/1994	Mitsuru et al.		

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